

REMARKS

This Amendment responds to the Office Action dated February 16, 2007 in which the Examiner rejected claims 10-11 and 16 under 35 U.S.C. §103.

Applicant respectfully requests the Examiner acknowledge the Information Disclosure Statement filed February 21, 2007.

Additionally, Applicant respectfully requests the Examiner acknowledges claim for foreign priority in the national stage application from the International Bureau.

Claim 10 claims an elevator apparatus comprising first and second driving machines, a car, a counterweight, suspending means, first and second car return pulleys, first and second counterweight return pulleys and first and second deflection pulleys. The first and second driving machines, first and second car return pulleys, first and second counterweight return pulleys and first and second deflection pulleys are all disposed in an upper portion of a hoistway. The first and second driving machines are disposed horizontally such that axes of rotation of the first and second drive sheaves extend vertically.

Through the structure of the claimed invention in having the first and second driving machines disposed horizontally such that axes of rotations extend vertically, as claimed in claim 10, the claimed invention provides an elevator apparatus which can be disposed more efficiently thus enabling overall installation space to be made more compact. The prior art does not show, teach or suggest the invention as claimed in claim 10.

Claim 16 claims an elevator apparatus comprising first and second driving machines, a car, a counterweight, suspending means and a control apparatus. The control apparatus controls the first and second driving machines by operating modes including a) a double operating mode in which the first and second driving machines are both driven simultaneously and b) a single operating mode in which only one of the first and second driving machines is driven.

Through the structure of the claimed invention having a control apparatus with a single operating mode in which only one of the first and second driving machines is driven, as claimed in claim 16, the claimed invention provides an elevator apparatus in which one of the driving machines can be inspected and maintained individually while the other one can continue to drive the elevator. The prior art does not show, teach or suggest the invention as claimed in claim 16.

Claims 10-11 and 16 were rejected under 35 U.S.C. §103 as being unpatentable over *Kobayashi et al.* (U.S. Patent 6,247,557) in view of *Abe* (U.S. Patent 7,117,977).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicant respectfully requests the Examiner withdraws the rejection to claims and allows the claims to issue.

Kobayashi et al. appears to disclose as shown in FIG. 1. A flattened driving mechanism 2 having a traction sheave 1 is disposed between a side wall 3a in an elevator path 3 and a space defined by projected planes of an elevator car 4 in the upward and downward directions. (Column 1, lines 21-25). In another elevator apparatus shown in FIG. 2 the flattened driving mechanism 2 is arranged in the

upper space of the balance weight 6 and adapted so as to suspend the car 4 through turning sheaves 8a, 8b and 8c. In this way, since the driving mechanism 2 having the traction sheave 1 is disposed between a side wall in an elevator path 3 and a space defined by projected planes of an elevator car 4 in the upward and downward directions, the arrangement allows to minimize a space that the whole apparatus does occupy without providing the machine room on the roof, so that the elevator apparatus can be provided while exhibiting high efficiency in utilizing the space.

(Column 1, lines 40-53). There are provided in Figs. 13 and 14 the driving mechanisms 2A, 2B which have the traction sheaves 1A, 1B arranged in the vicinity of the guide rails 9a, 9b, respectively. In the rear part of the elevator path 3 between the guide rails 9a and 9b, the common balance weight 6 is adapted so as to rise and fall under the guidance of the rails 10a, 10b. On the left and right sides of the car 4, the suspension ropes 7A, 7B respectively connected to the hitch parts 4ba, 4bb below the car roof 4c are wound round the traction sheaves 1A, 1B, respectively and the ropes 7A, 7B are coupled to the common balance weight 6 finally. Also in this embodiment, the left and right driving mechanisms 2A, 2B are controlled by the single control unit, so that the elevator car 4 can rise and fall owing to the mechanisms' synchronous operation at the same speed. Again, the elevator car 4 does rise and fall at speed equal to those of the suspension ropes 7A, 7B owing to the thrust force by the driving mechanisms 2A, 2B. As similar to the first to fifth embodiments, since the driving unit and the sheaves 8ha, 6hb, 8ia, 8ib are arranged so as not to interfere with the occupied space by the car 4 in the process of moving upward and downward, it is possible to reduce the height of the elevator path 3 to a minimum. (Column 13, lines 15-40).

Thus, *Kobayashi et al.* merely discloses driving mechanisms 2A, 2B disposed between a side wall of the elevator path and a projecting plane of the elevator car in an upward and downward direction (column 1, lines 21-25, Figs. 1, 2 and 13). Thus, nothing in *Kobayashi et al.* shows, teaches or suggests driving machines disposed horizontally such that axes of rotations extend vertically as claimed in claim 10. Rather, *Kobayashi et al.* is the opposite of the claimed invention since the driving machines are disposed vertically with axes of rotation extending horizontally. Additionally, *Kobayashi et al.* discloses a single control unit controlling left and right driving mechanisms 2A, 2B so that the elevator car can rise and fall owing to the mechanisms synchronous operation at the same speed (column 13, lines 29-32, emphasis added). Thus, nothing in *Kobayashi et al.* shows, teaches or suggests a control apparatus having a single operating mode in which only one of the first and second driving machines is driven as claimed in claim 16. Rather, *Kobayashi et al.* merely discloses synchronous operations of the driving mechanisms at the same speed and thus *Kobayashi et al.* teaches away from a single operating mode in which only one of the first and second driving machines is driven.

Abe appears to disclose in FIG. 9 a plan view of an elevator apparatus according to Embodiment 5, and FIG. 10 is a front view of the elevator apparatus of FIG. 9. In FIG. 10, the guide rails 22 and 23 are omitted. In the drawings, the first and second car suspending pulleys 37 and 39 are arranged on top of the car 24 so as to be situated inside the area of the car 24 in a vertical plane of projection. Further, the first and second car suspending pulleys 37 and 39 are arranged such that their rotation axes extend in the depth direction of the car 24. The car side return pulley device 31 has only one car side return pulley 53. The car side return

pulley 53 is mounted on the machine platform 26 above the car 24. Further, the car side return pulley 53 is arranged such that its rotation axis extends in the depth direction of the car 24. (Column 8, line 56 to column 9, line 3).

Thus, *Abe* merely discloses return pulley 53 mounted above a car 24. Nothing in *Abe* shows, teaches or suggests driving machines disposed horizontally such that axes of rotation extend vertically as claimed in claim 10. Rather, as clearly shown in Figures 1-11 of *Abe*, the driving mechanisms are disposed similar to *Kobayashi et al.* and thus are disposed vertically with the axes of rotation extending horizontally.

Additionally, nothing in *Abe* shows, teaches or suggests a control apparatus having a single operating mode in which only one of the first and second driving machines is driven as claimed in claim 16.

Since neither *Kobayashi et al.* or *Abe* taken singularly or in combination show, teach or suggest a) driving machines disposed horizontally such that axes of rotations extend vertically as claimed in claim 10 or b) a single operating mode in which only one of the first and second driving machines is driven as claimed in claim 16, Applicant respectfully requests the Examiner withdraws the rejection to claims 10 and 16 under 35 U.S.C. §103.

Claim 11 depends from claim 10 and recites additional features. Applicant respectfully submits that claim 11 would not have been obvious within the meaning of 35 U.S.C. §103 over *Kobayashi et al.* and *Abe* at least for the reasons as set forth above. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claim 11 under 35 U.S.C. §103.

As indicated above, new claims 17-19 have been added. Applicant respectfully submits that these claims are also in condition for allowance.

The prior art of record, which is not relied upon, is acknowledged. The references taken singularly or in combination do not anticipate or make obvious the claimed invention.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicant respectfully petitions for an appropriate extension of time. The fees for such extension of time may be charged to Deposit Account No. 02-4800.

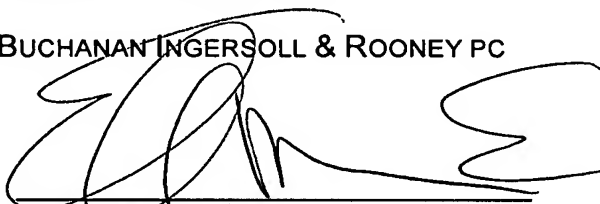
In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

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